

**Remarks**

**I. Request To Withdraw Finality of the Present Office Action**

**A. Claim Amendments Were Discussed And Approved Prior to Issuance of the First Office Action**

Applicants respectfully request the Primary Examiner to withdraw the finality of the Office Action mailed July 12, 2004. On January 15, 2004, Examiner Mayekar telephoned Applicants' representative (Michael Barrett) and expressed concern that the wording of part of claim 1 was unclear. Applicants' representative telephoned the Examiner on January 21 and discussed amendments to clarify the claims, and the Examiner agreed that the amendments would address the concerns of the Office. Applicants' representative understood that a Section 112, 2nd paragraph rejection would be lodged, and that the proposed amendments could then be entered in response to obtain a notice of allowance.

On February 3, 2004, the Examiner mailed an Office Action that lodged an enablement rejection.<sup>1</sup> No art rejections were lodged. The rejection reiterated the Examiner's concerns about the wording of the claims. In response, Applicants amended claims 1, 10-11, 15-17, 21 and 27 as discussed during the January 21st telephone call and requested a notice of allowance.

On July 12, 2004, the Examiner mailed the present Office Action, which is listed as final. This Office Action lodges new rejections. Original claim 3 now stands rejected for lack of enablement. The present Office Action also lodges new art rejections applied to all the claims.

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<sup>1</sup> Applicants respectfully assert that the rejection should have been styled as an indefiniteness rejection, given the concern of the Office was one of word-choice/clarity, not enablement. A *prima facie* case of lack of enablement was not established. Applicants' response addressed the clarity of the claims.

**B. The M.P.E.P. Rules Prohibit a Final Office Action for New Grounds of Rejection That Are Not Necessitated By Amendment or That Are Made In the Face of Anticipated Amendments**

“[T]he invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied ... .” M.P.E.P. 706.07. Applicants should not be prematurely cut off in the prosecution of their application. *Id.* Applicants are entitled to a full and fair hearing and be allowed to adequately respond to well-developed issues. *Id.* Second Actions should not be final if the Examiner introduces a new ground of rejection not necessitated by Applicants’ amendment. M.P.E.P. 706.07(a). An Action should not be final if it includes a rejection, based on art not previously of record, of any claim amended to include limitations that should reasonably have been expected to be claimed. *Id.*

**C. The Present Office Action Should Not be Final**

Here, a new rejection to original claim 3 has been lodged, which was not necessitated by any amendment. The Examiner now argues that magnetophoresis is not enabled, yet any such concern should have equally been present at the time of the first Office Action. In other words, such a rejection could have, and should have, been raised earlier in order to give Applicants a fair chance for a complete response (*i.e.*, a “full and fair hearing”). M.P.E.P. 706.07.

The new art rejections could and should have also been raised earlier. The claims were amended exactly as discussed with (and approved by) the Examiner in the phone call that preceded the issuance of the first Office Action. Therefore, any amendment limitations “should reasonably have been expected to be claimed” M.P.E.P. 706.07. Accordingly, new art rejections in a final Office Action are improper. *Id.* Additionally, by knowing the substance of the

amendment, a full search of the present invention could have and should have been performed. *Id.* Moreover, even if the Applicants' representative had not spoken to the Examiner, nothing suggests that a full search of the invention could not have been performed earlier to uncover the art now being asserted for the first time in a final Office Action. Nothing suggests a different search or analysis was necessitated because of the clarity amendments entered by Applicants.

If the present Office Action is maintained as final, Applicants will consequently not be afforded their "full and fair hearing." *Id.* This, in turn, would represent a clear departure from the rules and policies of M.P.E.P. 706.07 *et seq.* Applicants therefore respectfully request the Primary Examiner to withdraw the finality of this Office Action.

## **II. Status of Claims**

Claims 1-27 were pending. Independent claims 1, 16, 17, and 21 have been amended. Claims 2 and 3 have been canceled. Claims 1 and 4-27 will be pending upon entry of these amendments. No new matter has been added.

## **III. Objections to Specification**

The abstract and specification are objected-to for containing language similar to that which was clarified in Applicants' previous response. The specification and abstract have been amended as suggested by the Examiner. Applicants respectfully request removal of this objection.

## **IV. Objections to Drawings**

The drawings have been objected-to for apparently not showing magnetophoresis forces. Applicants respectfully traverse the objection despite the cancellation of claim 3.

37 C.F.R. § 1.81 states, “The applicant for a patent is required to furnish a drawing of his or her invention where necessary for the understanding of the subject matter sought to be patented ...” (emphasis added). *See also* 35 U.S.C. § 113. In 37 C.F.R. § 1.83, the content of such a drawing (if necessary) is set forth. The law does not require that each and every element of the claims always be illustrated. Here, a separate drawing of a magnetophoresis force would not be necessary for an understanding of the subject matter of the present invention. To understand a force, one of ordinary skill in the art does not need to see an arrow within a drawing that represents that force. Moreover, the Examiner has presented no evidence to suggest that a separate drawing of a magnetophoresis force (e.g., a labeled arrow) would be necessary to someone of ordinary skill in the art for understanding any claim. For instance, the Examiner has not included an affidavit pursuant to M.P.E.P. 2144.03. The objection to the drawings is therefore unsupported.

Nevertheless, and for unrelated reasons, claim 3 has been canceled. This cancellation renders the objection to the drawings moot. Applicants respectfully request its removal.

#### **V. Enablement Rejection**

Claim 3 stands rejected as allegedly lacking enablement. Applicants respectfully traverse despite the cancellation of claim 3.

“The specification must teach those skilled in the art how to make and use the full scope of the claimed invention without ‘undue experimentation.’” M.P.E.P. 2164.08 (citing *In re Wright*, 999 F.2d 1557, 1561, 27 U.S.P.Q. 1510, 1513 (Fed. Cir. 1993)). The test of enablement is whether the experimentation needed to practice the invention is undue. M.P.E.P. 2164.01

(citing *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916)). When considering the issue of enablement, the critical inquiry is whether the specification, in combination with the knowledge in the art, teaches how to make and use the claimed invention. *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1571 (Fed. Cir. 1991). “The enablement requirement is met if the description enables any mode of making and using the invention.” *Johns Hopkins Univ. v. CellPro, Inc.*, 152 F.3d 1342, 1361 (Fed. Cir. 1998) (quoting *Engel Indus. Inc. v. Lockformer Co.*, 946 F.2d 1528, 1533 (Fed. Cir. 1991)) (emphasis added).

The court in *Gould v. Mossinghoff*, 229 USPQ 1 (D.C. 1985) aptly stated:

In examining a patent application, the PTO is required to assume that the specification complies with the enablement provisions of Section 112 unless it has “acceptable evidence or reasoning” to suggest otherwise. *In re Marzocchi*, 439 F.2d 220, 223-24, 169 USPQ 367, 369-370 (CCPA. 1971).

The PTO thus must provide reasons supported by the record as a whole what the specification is not enabling. *Application of Angstadt*, 537 F.2d 498, 504, 190 USPQ 214, 219-220 (CCPA 1979). Then and only then does the burden shift to the applicant to show that one of ordinary skill in the art could have practiced the claimed invention without undue experimentation. *In re Strahilevitz*, 668 F.2d. 1229, 1232, 212 USPQ 561, 563-64 (CCPA 1982).

The current rejection should be withdrawn in view of these rules and law. Here, the basis for the enablement rejection is only that a “short phrase on page 7 describes the magnetophoresis ...” Office Action, page 4. This fails to rise to a *prima facie* case because no argument or explanation is propounded to address why the specification would not teach one how to make and use the claimed invention without undue experimentation. Instead, it appears that the Examiner expects a longer description than what is given, without any supporting

evidence or reasoning, that a longer (or different) description would be required for one to make and use the invention.

If the Office doubts that the specification shows how to make and use the invention, then it must explain its reasoning. In this regard, Applicants note that “it is incumbent upon the Patent Office...to explain why it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement.” M.P.E.P. 2164.04 (quoting *In re Marzocchi*, 439 F.2d 220, 224, 169 U.S.P.Q. 367, 370 (CCPA 1971)) (emphasis added). If the Examiner wishes to rely on personal knowledge or evidence in the art to support an enablement rejection, that position would have to be supported by citing published references or by Examiner’s Affidavit. M.P.E.P. 2144.03.

The current enablement rejection is also inconsistent with the Examiner’s rejection of claim 3. In rejecting claim 3, the Examiner points to a patent that allegedly renders magnetophoresis aspects of the invention obvious. Applicants disagree with that rejection, but to the extent that the Office argues that magnetophoresis is well-known (or obvious), the current enablement rejection is improper because the law is clear that a patent specification need not disclose what is well-known in order to be enabled. *S3 Inc. v. Nvidia Corp.*, 259 F.3d 1364, 1371 (Fed. Cir. 2001) (“The law is clear that patent documents need not include subject matter that is known in the field of the invention and is in the prior art, for patents are written for persons experienced in the field of the invention. ... To hold otherwise would require every patent document to include a technical treatise for the unskilled reader.”).

Nevertheless, and for unrelated reasons, claim 3 has been canceled. This cancellation renders the present enablement rejection moot. Applicants respectfully its removal.

## **VI. Obviousness Rejections**

Claims 1 and 4-26 stand rejected as being allegedly obvious in view of U.S. Patent No. 4,333,086 ("Ebi"). Claims 2 and 3 stand rejected as being allegedly obvious in view of Ebi combined with U.S. Patent No. 6,019,455 ("Taylor"). Applicants respectfully assert that these rejections should be withdrawn for at least the reasons presented below.

### **A. Amendments to Independent Claims 1, 16, 17, and 21 Should be Entered**

Applicants have requested that the finality of the present Office Action be withdrawn. In the event that the request is denied, the amendments to claims 1, 16, 17, and 21 should still be entered. The amendments place this application in condition for allowance or in better form for appeal. M.P.E.P. 714.12. The amendments change each independent claim in the same general way—specifying that the extraction force comprises dielectrophoresis. This limitation was originally within now-canceled claim 2, and hence the amendments do not "raise new issues that would require further consideration and/or search." M.P.E.P. 714.13. Applicants therefore respectfully request the amendments to be entered even if this Office Action remains final.

### **B. All the Claims Are in Condition for Allowance**

Independent claims 1, 16, 17, and 21 have been amended to require an extraction force comprising dielectrophoresis. Each of these claims also involve this extraction force (a) forming the fluid packet and (b) extracting the fluid packet. At page 18, lines 19-31, the specification provides a non-limiting example of these features. There, dielectrophoresis initiates packet

formation, drawing fluid into a packet, and dielectrophoresis then overcomes cohesion forces to detach the packet. The wording of the present claims of course encompasses other situations. These claimed features are nowhere disclosed or suggested in the cited art, taken alone or in combination. Instead, Taylor is directed to methods of depositing material on a surface. Abstract. Ink particles are supplied to a cell. *Id.* Movement of the particles within the ink is effected towards an aperture, thereby concentrating the particles. *Id.* Thereafter the particles are removed from the concentration within the ink through the aperture and deposited onto the surface. *Id.*

Taylor nowhere discloses or suggests using a dielectrophoresis force to form fluid packets and then to extract those packets. Taylor's discussion of dielectrophoresis is limited to background discussion and modeling work on transporting pre-existing particles (*e.g.*, ink particles). *See* column 1, lines 48-53 (background); column 7, lines 36-42 (modeling work); column 8, lines 49-67 (dielectrophoresis description for particle transport). In none of this discussion is dielectrophoresis used (or suggested) to form a fluid packet as required by the claims; rather, dielectrophoresis is modeled for possibly moving ink particles, which have already been formed, within a fluid towards an ejection point. *See* column 2, lines 60-65 (explaining that the particles flow within a fluid); column 8, lines 49-67 (dielectrophoresis to generate the particle flow). In Taylor, dielectrophoresis is also not disclosed or suggested as being a mechanism for extracting particles as required by the claims. Again, dielectrophoresis is only disclosed as a candidate for particle transport within a fluid towards an ejection point. Highlighting the lack of disclosure or suggestion concerning dielectrophoresis, Taylor's



discussion of particle ejection is explicitly limited to embodiments where charged particles are ejected by way of a pulse from an electrophoretic electrode. *See* column 6, line 36-column 7, line 10. As is well-known in the art and as even disclosed by Taylor, however, electrophoresis differs significantly from dielectrophoresis. *See, e.g.*, column 8, lines 16-67 (contrasting electrophoresis and dielectrophoresis). As described below, the failure of the cited art to disclose or suggest the requirements of each independent claim to use dielectrophoresis to form and extract packets demonstrates the allowability of the present application.

Ebi also nowhere discloses or suggests using a force comprising dielectrophoresis to form fluid packets and then to extract those packets. Instead, Ebi is directed to charging ink and then attracting the charged ink towards an oppositely-charged external electrode. *See, e.g.*, column 1, line 64-column 2, line 2. Dielectrophoresis is nowhere disclosed or even suggested. In fact, the Examiner acknowledges that Ebi does not disclose a dielectrophoresis extraction force, relying instead (albeit improperly) upon Taylor for that aspect of the invention. *See* Office Action, page 6.

As discussed above, neither of the cited references individually discloses or suggests the required extraction force (a) forming the fluid packet and (b) extracting the fluid packet. Therefore, even if the references are combined, explicit requirements of the claims are not present in the cited art. Accordingly, there can be no *prima facie* case of obviousness, and the present rejection should be withdrawn. Applicants respectfully assert that the claims are in condition for allowance and request the present rejection to be withdrawn.

## **VII. Conclusion**

Applicants respectfully submit that claims 1 and 4-27 are in condition for allowance. Should there be any questions, please do not hesitate to call the undersigned attorney at (512) 536-3018.

Respectfully submitted,



Michael C. Barrett  
Reg. No. 44,523  
Attorney for Applicants

FULBRIGHT & JAWORSKI L.L.P.  
600 Congress Avenue, Suite 2400  
Austin, Texas 78701  
Telephone: (512) 536-3018  
Facsimile: (512) 536-4598

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